Pacific Northwest Rail Corridor

Everett to Blaine Commuter Rail Preliminary Feasibility Study

Technical Memorandum #1 – Station Site Evaluation

Prepared for the
Washington State Department of Transportation and Snohomish County

by
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The purpose of this technical memorandum is to summarize the site evaluation that was completed of potential sites for the location and development of stations associated with a concept commuter rail service. This service is between Everett and Blaine on the Burlington Northern and Santa Fe Railway (BNSF) mainline. The objective of the overall study is to complete a preliminary feasibility analysis of ridership, station sites, and system constraints.

Other technical memoranda being produced for the Everett to Blaine Commuter Rail Preliminary Feasibility Study include:

?? Technical Memorandum No. 2 – Trackway Facility Constraints
?? Technical Memorandum No. 3 – Ridership Estimation

Introduction

The study team participated in a series of site visits to assess the suitability of station sites for the Everett to Blaine commuter rail service. The evaluation does not represent a comprehensive site evaluation, nor was there public discussion of acceptable sites. The seven sites used for the analysis are locations determined best for simulation of a commuter rail service within the ridership model. These station locations are part of the basis for developing travel time and transportation demand estimates within the region.

The seven station sites used for this analysis are by no means the only sites that were evaluated, nor are they the definite locations of stations for the future service. Each station, as included in the ridership analysis, is only a surrogate representing an entire traffic analysis zone. With the exception of the Bellingham and Everett station sites (which are either built and operating, or under construction), the actual sites assigned to each surrogate, as described in this memorandum, represent an initial sketch level attempt to determine appropriate locations of stations. The station sites chosen are intended to encourage community discussion about potential station site locations before more in-depth commuter rail studies and plans are initiated. Applying the criteria described below, the seven station sites chosen for inclusion in the ridership analysis were located at Blaine, Bellingham, Mt. Vernon, Stanwood, English, Marysville, and Everett.

A number of other sites were proposed and analyzed, but were not included in the ridership estimation analysis. These additional sites have not been eliminated from further discussion. Each of them should be considered in subsequent studies of this proposed commuter rail line. The sites that were not used in the analysis are described at the end of this memorandum.

How were the station site locations selected?

In discussions with Snohomish County and the project Technical Advisory Committee, seven stations were situated along the corridor. Criteria used to determine station sites included:

?? Must have good traffic access and adequate land for parking;
?? Must not hamper commuter, freight, or intercity passenger rail operations;
?? Priority given to sites that offer multi-modal transportation connection opportunities, including existing Amtrak stations;
?? Only one station in each city or community; and
?? Stations must serve present or planned urban hubs at intervals consistent with typical US commuter rail systems.

Station Sites Used in Ridership Estimation Process

Everett Station Site

The Everett station site is currently under construction. Amtrak *Cascades* and *Sounder* service have both planned stops there, and the station will include local bus, taxi, and airport shuttle connections, and provide commuter park-and-ride facilities. In addition to these transportation connections, the station will accommodate a variety of mixed commercial and institutional uses, including restaurants, educational facilities, and a career development center. The site is located on the BNSF mainline east of the tunnel. Once in operation, there will be adequate park-and-ride, platform, and station accommodations. Environmental concerns and access issues have already been dealt with prior to breaking ground.

Site Location: Located at the intersection of Smith Avenue and 32nd Street in downtown Everett.

Parking and Access: According to city of Everett staff, all of the new parking spaces under construction are "spoken for", however, Sound Transit is constructing an additional 400+ spaces on the east side of the BNSF mainline that should be completed in 2002. Access to I-5 and SR 2 and SR 529 are excellent. Connections to other lines and modes will be good.

Environmental Constraints: All environmental constraints have already been dealt with prior to breaking ground on the current construction.

Rail Operations: This station has already been approved by the BNSF. Much of the rail operations issues have already been taken care of.

Marysville Station Site

Site Location: Just south of the intersection of 8th Avenue and Delta Avenue.

Parking and Access: There is ample room for development of parking, station amenities, and platform in the vacant lot to the east of the mainline track. There is good access to I-5 and the site is constrained only to the north by a road crossing over 8th Avenue.

Environmental Constraints: No significant impacts predicted.

Rail Operations: Through the potential station site there is a long section of straight single track with a good siding to the west. It is likely that the proposed commuter trains will stop at this station on the mainline. This site offers the added possibility that if a bypass track is needed in the future, there is sufficient right-of-way available to construct a second mainline track.

Looking north from the Marysville site to 8th Avenue.

Looking south at the Marysville site. The lot available for station development is on the left

English Station Site

The region surrounding this site has experienced significant growth over the past few years and is projected to continue growing. As such, it would be a likely location for a station despite its rather rural character. One problem that must be overcome is the frequent delays to vehicular traffic at this site, which can last for hours at a time, due to freight train congestion. This is caused by the location of the north end of the controlled siding at English relative to the location of the at-grade highway crossing of SR 531, which is also near the north end. The BNSF has asked that the siding at English be extended to the south. Should this occur, it would be combined with the closure of an un-related at-grade crossing at 156th Street, which would allow the

BNSF to hold trains in the siding without blocking SR 531 (172nd Street). The site, currently located within an unincorporated area, is about to be annexed by the city of Marysville.

Site Location: This potential site is located just north and east of the intersection of the mainline and SR 531 (172nd Street) in the unincorporated community of Lakewood.

Parking and Access: The site has good road access to I-5 via SR 531. Currently there is no station, platform, or park-and-ride lot, however, there is significant room to the east of the mainline to build these facilities.

Looking north at the English site. The siding is on the left and the mainline on the right. The open lot with station development potential is on the right.

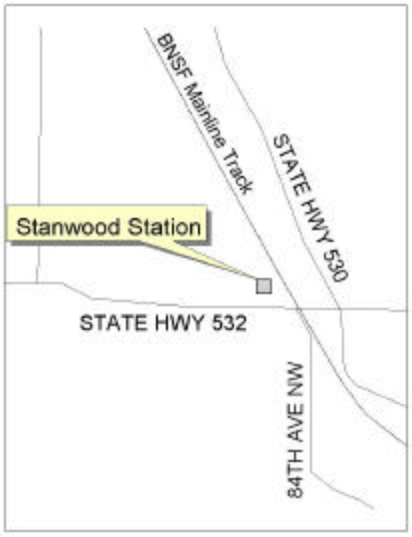
Environmental Constraints: To the west side of the track is a small creek that may be of environmental concern for fish habitat; however, there is ample room in other areas surrounding the site.

Rail Operations: The two tracks through the station site are composed of a mainline to the east and a controlled siding (English) to the west. Mainline speed limits are 79 mph for passenger and 50 mph for freight. Due to the location of the mainline on the east side of the siding, it is advantageous to locate the station site to the east side of the mainline as well. This is because the BNSF would likely place an opposing freight train into the siding track in order to allow for an unobstructed movement of a passenger train. Conversely, a passenger station located on the west side of the mainline and siding tracks would often be obstructed by a freight train waiting in the siding. For this reason, it is recommended that a passenger station at English be located east of the mainline.

Stanwood Station Site

This site appears rural in nature, but is located in the center of a quickly growing community. As such, it would be an ideal location in the future for commuters.

Site Location: This station site is located just north of the mainline and its intersection with 271st Street in Stanwood.



Parking and Access: There is excellent access to SR 532, and thereby, both Camano Island and I-5. There is no current station, platform, or park-and-ride, but these could easily be accommodated, especially in the open lots to the north of the mainline intersection with SR 532.

Environmental Constraints: No significant impacts predicted.

Rail Operations: Through the station site there is the mainline to the west with speed limits of 79 mph for passenger and 50 mph for freight, and a siding to the east. Locating a station on the east side of the BNSF mainline might be a problem if a freight train is waiting in the siding (a likely and desirable occurrence given that passenger trains have precedence over opposing freight traffic). Should this be the case, the Stanwood station should be located as close to SR 532 (271st Street) as practical. This would allow a freight train to be stopped in the siding north of the 271st Street crossing without blocking passenger access to the station or the train.

Looking north of the intersection of SR 532 and the mainline. The siding is on the right and mainline on the left. Probable station location would be in the empty lot on the left.

Mt. Vernon Station Site

This site is located in the older section of downtown of Mt. Vernon. Construction of a new Amtrak station is underway and scheduled to open during the first quarter of 2001.

Site Location: Located in downtown Mt. Vernon between the at-grade road crossings at Gate Street on the north and Kincaid Street on the south.

Parking and Access: The planned site has rather good access to I-5, and will have good connections to other transit modes and Amtrak service. Parking in the immediate vicinity is limited due to significant development. Off-site parking is an option, but deserves further study.

Environmental Constraints: No significant impacts predicted. Environmental concerns have already been addressed prior to breaking ground.

Rail Operations: This station site had already been approved for Amtrak use in terms of rail operations logistics. As part of this process, negotiations were completed to ensure that stopped trains would not block local road traffic at grade crossings. The track through the site is a straight single track with curves just to the north and south, and speed limits of 50 mph for passenger and 45 mph for freight. A large siding to the east side exists about a half-mile south of the station site.

Looking south at the station site from the Gate Street crossing.

Bellingham Area Station Site

Within the Bellingham area, the site considered for this analysis is the Fairhaven Multimodal Transportation Center. The Center accommodates an Amtrak station, intercity bus terminal and local transit services, and is adjacent to a marine cruise terminal serving both Alaska Ferries and Inland Ferries.

Site Location: This site is located in the Fairhaven section of Bellingham. The address is 401 Harris Avenue.

Parking and Access: There is already a park-and-ride lot located there, which could be expanded or shared. The rail station and platform are more than adequate. The main drawback of this site is that it is not close to Bellingham's central business district, nor the eastern and northern residential neighborhoods.

Environmental Constraints: No significant additional impacts predicted.

Rail Operations: There is already a good siding track to the west of the mainline through the station site, and the major rail operations issues with regard to site location were already addressed in order to site the current Amtrak station. The track speed limits through the station site are 40 mph for passenger and 35 mph for freight.

Looking north at the current Amtrak station on the right. The mainline is on the right, siding on the left.

Blaine Station Site

This potential site is located at a BNSF depot less that a mile from the Canadian border. The station is still partially used by BNSF and could possibly be shared by the proposed commuter rail operation.

Site Location: The station site is just south of the at-grade road crossing at Marine Drive, and is just west of Peace Portal Drive.

Parking and Access: The site is very close to I-5 and has very good access. There is ample room to develop a park-and-ride facility east of the tracks, especially to the north. An asphalt platform would also have to be built.

Environmental Constraints: West of the tracks there may be a wetland area that could be of concern, however, the necessary site improvements could probably be made without expansion in this direction.

Rail Operations: The track through the station site is rather straight with a small siding to the west. The speed limit through the station site is 50 mph for passenger and 30 mph for freight. Due to the closeness of the border and customs inspection facilities, additional tracks and sidings may be necessary.

Looking north at the current BNSF station. Siding is on the left, mainline on the right.

Station Sites Not Used in Ridership Estimation Process (Evaluated in the Field)

Bellingham Station Sites

Downtown Site

This site is located about four blocks from downtown Bellingham at an existing BNSF depot in an area that is slated for urban renewal. There is an existing station, which is currently in use by BNSF, and an adequate platform. This site is centrally located in Bellingham, and as such should be considered in further station studies.

Site Location: Located at existing BNSF depot.

Parking and Access: Walking access is good. The station is closely bracketed by road crossings on the north by a major street. There is a dense network of local city streets and state arterials streets surrounding the station and adjoining lots. Closure of some of these streets and clearing the adjoining lots would leave enough room for development of park-and-ride and would simplify access.

Environmental Constraints: No significant impacts predicted.

Rail Operations: This site has good sidings and track speed limits are 20 mph for both passenger and freight. This is a good site due to the relatively slow track speed because of a nearby restrictive curve.

North Bellingham Site

This potential site is in the vicinity of an active cement plant just outside of the city limits of Bellingham. There are a number of marginal sites for a commuter rail station. This site should be considered for a maintenance facility, but not for a passenger station.

Site Location: Just outside Bellingham city limits, near a cement plant with active spur lines.

Parking and Access: The best access point is at Cliffside Drive in the vicinity of the "Marine Drive Trail Park" which is owned by the Port of Bellingham. At this location there is a very short section of straight track where the mainline crosses Cliffside Drive. Development in this area would require using parklands and would be very constrained. For example, it would be necessary to build the station adjacent to the grade crossing, leaving little room for a park-and-ride facility. A potential station site that currently has poor access, but which has better development potential, is the semi-vacant lot northwest of the cement plant. At this

location, there is room to build a station, platform, siding, and park-and-ride facility. There's also room to accommodate a maintenance facility should this site be chosen for this function. Access could be created without much difficulty by paving an over-grown road connecting the site directly with Marine Drive.

Environmental Constraints: There would also be environmental concerns at the Cliffside Drive location due to the wetland vegetation and drainage issues. The site in the vacant lot northwest of the cement plant may also have significant wetland vegetation and some drainage characteristics that would merit further attention.

Rail Operations: The Cliffside Drive site is located on the tangent (straight track) between two reversing curves. This is not a desirable location for a station due to track geometry. The cement plant site appears to be adequate for a maintenance facility. However, the existing spur tracks are heavily used to load and store rail cars used for the production of cement. This industrial use would conflict with a passenger station. Currently, a couple of spur tracks branch off at this location. The mainline in this area is straight single track with speed limits of 45 mph for passenger and 35 mph for freight.

North Mt. Vernon Station Site

This site is already an Amtrak stop on the *Cascade* line and is located just south of the bridge over the Skagit River. Mt. Vernon is expanding quickly in this direction. At the site there is already an adequate station and platform, which is currently used by BNSF employees.
Site Location: Located northwest of the intersection of the mainline with College Way.

Parking and Access: The current parking lot is fairly large, and there is plenty of room for expansion of the parking lot into adjacent vacant lots. Street access is adequate from College Way although left hand turns are discouraged. I-5 is nearby. The road traffic configuration at the access point will have to be changed due to the fact that only right turns are allowed when exiting the parking lot.

Environmental Constraints: No significant impacts expected.

Rail Operations: The track is single straight track with a short siding used to store a switch engine on the north end of the platform. Currently, the speed limits for passenger and freight are 50 mph and 45 mph, respectively. There is enough room for expansion of the track if a siding was deemed necessary.

South Marysville Station Site

This site is not ideal. There is little room for necessary station features such as a park-and-ride lot, station, platform, or additional track, should this be required. Additionally, there are significant rail operations issues. As such, this site should be dropped from a list of sites for future consideration.

Site Location: Located at the intersection of Cedar Road and First Avenue.

Parking and Access: Little room for development of park-and-ride. The access is not optimal, such as when passenger trains stop at the station to board and deboard passengers, the intersection at Cedar Road and First Avenue would be blocked.

Environmental Constraints: There are significant environmental concerns due to the fact that the site is very close to the Snohomish River and the surrounding wetlands. The area is also home to some of the few remaining historic buildings in Marysville, the location of which might complicate site improvements.

Rail Operations: The 20 mph track speed is advantageous for a passenger train station. This relatively slow speed will allow passenger trains to slow down then accelerate without much loss in overall running-time. However, this proposed station site, located just north of the through-truss bridge crossing the Snohomish River, offers little opportunity for BNSF to construct a bypass track around a passenger train stopped at the station. And, as mentioned above, a stopped passenger train will block street access to the very station passengers are attempting to reach.

Station Sites Not Used in Ridership Estimation Process (Not Evaluated in the Field)

Burlington Site

This site would be located just north of the Skagit River in Burlington, at the intersection of the mainline with Cook Road, near SR 20. This site would be significantly closer to commuters on the northern side of the Skagit River than the Mt. Vernon sites would be, and its development might result in a higher level of ridership overall. A detailed analysis of this station has not been completed, but should be if the proposed commuter rail service is studied further. This station was not analyzed due to the fact that it was proposed very late in the analysis process.

Ferndale Site

This site would be located in downtown Ferndale. This city is growing very quickly and is already as large as many of the larger communities in the North Sound area's I-5 corridor. It has the potential to increase the overall ridership on the proposed commuter rail line. A detailed analysis of this station has not been completed, but should be if the concept commuter rail service is studied further. This station was not analyzed due to the fact that it was proposed very late in the analysis process.